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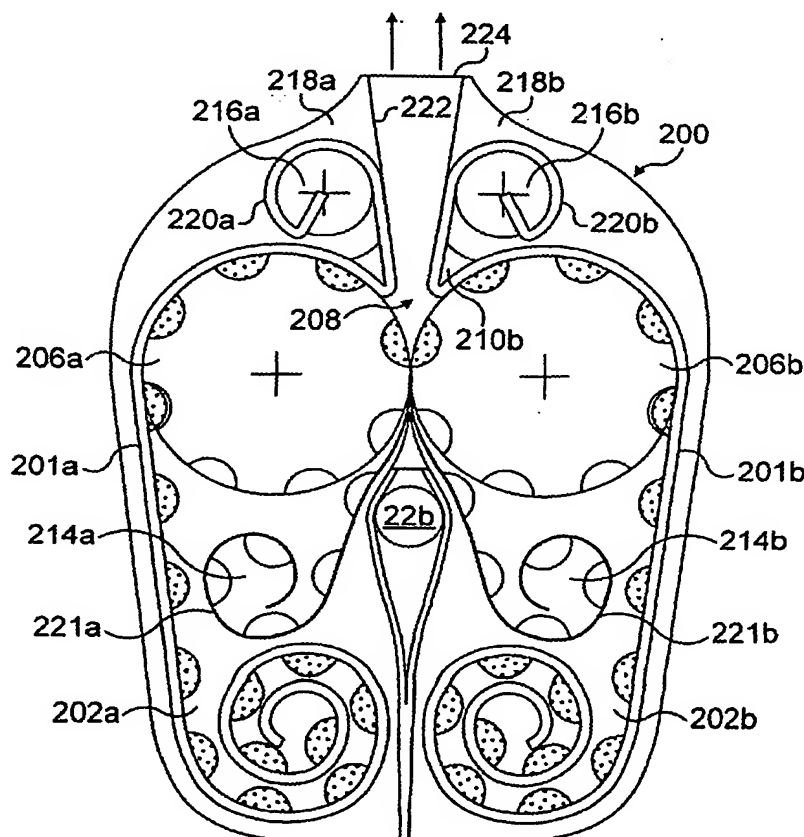
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(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: **MEDICAMENT DISPENSER**



(57) Abstract: There is provided a medicament dispenser (200) for use in the delivery of a combination medicament product. The dispenser (200) comprises first and second medicament containers (201a, 201b) for containing first and second medicament active component; and first and second release means (216a, 216b) for releasing respective dose portions of the first and second medicament active component from the first and second medicament containers (201a, 201b). The first medicament active component is kept separate from the second medicament active component until the point of release thereof for delivery in combination. The first medicament active component is selected from the group consisting of salmeterol, formoterol and any salts or solvates thereof. The second medicament active component is selected from the group consisting of beclomethasone ester, fluticasone ester and any salts or solvates thereof.

WO 03/061744 A1



European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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## INTERNATIONAL SEARCH REPORT

 Internat Application No  
 PCT/EP 03/00599

 A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 A61M15/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01 39823 A (INNOVATA BIOMED LTD; WILLIAMS STEVE (GB); BRAITHWAITE PHILIP (GB)) 7 June 2001 (2001-06-07)  page 7, line 26 -page 30; figures 6,7 page 5, line 22 -page 6, line 7 ---	1-6, 11-13, 20,21, 31-36
X	WO 00 64519 A (HAIKARAINEN JUSSI; KOSKELA TOMMI (FI); KOIVISTO ANTTI (FI); ORION) 2 November 2000 (2000-11-02)  page 3, line 21 -page 6, line 2 --- -/--	1-6, 11-13, 20,21, 31,32,34

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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\*P\* document published prior to the international filing date but later than the priority date claimed

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\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&amp;\* document member of the same patent family

Date of the actual completion of the international search

19 June 2003

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27/06/2003

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C.(Continuation) DOCUMENTS CONSIDERED RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/027789 A1 (GOEDE JOACHIM ET AL) 11 October 2001 (2001-10-11)  page 4, left-hand column, line 19 - line 40; figure 1 page 3, left-hand column, line 17 -page 3, right-hand column, line 32 ---	1-6, 11-13, 20-22, 31, 32, 34
X	WO 02 04055 A (AEROGEN INC) 17 January 2002 (2002-01-17)  page 3, line 14 -page 5, line 15 page 1, line 16 -page 2, line 3 ---	1, 7, 8, 11, 12, 14, 15, 20, 23, 24, 31, 32, 34-36
X	US 5 002 048 A (MAKIEJ JR WALTER J) 26 March 1991 (1991-03-26)  column 2, line 6 -column 3, line 14 ---	1-7, 20-32, 34, 36
A	WO 01 98176 A (GARRILL KARL ANDREW ;GLAXO GROUP LTD (GB); WALKER RICHARD IAN (GB)) 27 December 2001 (2001-12-27) page 1, line 13 -page 2, line 23 page 7, line 6 -page 9, line 8 ---	20-30
A	US 4 811 731 A (RAND PAUL K ET AL) 14 March 1989 (1989-03-14) column 4, line 67 -column 5, line 7; figures 7, 10 ---	7, 9, 14, 16, 17
A	WO 00 45879 A (ANDERSON GREGOR JOHN MCLENNAN ;RAND PAUL KENNETH (GB); GLAXO GROUP) 10 August 2000 (2000-08-10) page 4, line 12 - line 15 ---	10, 19
A	WO 01 41849 A (ANDERSON GREGOR JOHN MCLENNAN; BONNEY STANLEY GEORGE (GB); JONES A) 14 June 2001 (2001-06-14) page 6, line 17 -page 7, line 14 page 17, line 19 - line 21 page 56, line 22 -page 57, line 4 ---	1-6, 23-27
A	GB 1 387 954 A (MILES LAB) 19 March 1975 (1975-03-19) page 1, left-hand column, line 32 -page 1, right-hand column, line 74 ---	7-9, 14-17
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## INTERNATIONAL SEARCH REPORT

Internat. Application No  
PCT/EP 03/00599

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 98 34664 A (WIDERSTROEM CARIN ;ASTRA AB (SE)) 13 August 1998 (1998-08-13)  page 1, line 20 -page 4, line 5 page 9, line 23 -page 10, line 6; figures 9A,B  -----	14, 16-18, 31-34

# INTERNATIONAL SEARCH REPORT

Inte: Application No.  
EP 03/00599

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 37  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/00599

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0139823	A	07-06-2001	AU 2187801 A BR 0016085 A CA 2390791 A1 EP 1233805 A1 EP 1300171 A2 WO 0139823 A1 JP 2003515396 T NO 20022545 A	12-06-2001 06-08-2002 07-06-2001 28-08-2002 09-04-2003 07-06-2001 07-05-2003 29-05-2002
WO 0064519	A	02-11-2000	FI 990913 A AU 4122600 A BR 0009976 A CA 2369722 A1 CZ 20013788 A3 EP 1173243 A1 WO 0064519 A1 HU 0200818 A2 JP 2002541989 T NO 20015083 A SK 15232001 A3	24-10-2000 10-11-2000 15-01-2002 02-11-2000 17-07-2002 23-01-2002 02-11-2000 29-07-2002 10-12-2002 21-12-2001 06-08-2002
US 2001027789	A1	11-10-2001	DE 19961300 A1 AU 3009901 A BR 0016496 A CA 2327973 A1 WO 0143801 A2 EP 1239905 A2 HU 0203500 A2 NO 20022850 A	21-06-2001 25-06-2001 27-08-2002 18-06-2001 21-06-2001 18-09-2002 28-03-2003 15-08-2002
WO 0204055	A	17-01-2002	US 6543443 B1 AU 1875202 A WO 0204055 A1	08-04-2003 21-01-2002 17-01-2002
US 5002048	A	26-03-1991	NONE	
WO 0198176	A	27-12-2001	US 6315112 B1 AU 7297101 A WO 0198176 A2 US 2002048552 A1	13-11-2001 02-01-2002 27-12-2001 25-04-2002
US 4811731	A	14-03-1989	AT 396872 B AT 204086 A AU 591152 B2 AU 6065586 A BE 905189 A1 BR 8603576 A CA 1272917 A1 CH 672600 A5 CY 1481 A DE 3625685 A1 DE 3682457 D1 DK 360986 A ,B, EP 0211595 A2 ES 2000781 A6 FI 863094 A ,B, FR 2585563 A1 GB 2178965 A ,B	27-12-1993 15-05-1993 30-11-1989 12-02-1987 29-01-1987 04-03-1987 21-08-1990 15-12-1989 08-12-1989 12-03-1987 19-12-1991 31-01-1987 25-02-1987 16-03-1988 31-01-1987 06-02-1987 25-02-1987

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/00599

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4811731	A	GR 861995 A1	04-11-1986
		HK 67589 A	01-09-1989
		HU 44182 A2	29-02-1988
		IE 59026 B1	15-12-1993
		IL 79550 A	10-06-1991
		IT 1195984 B	03-11-1988
		JP 1871546 C	06-09-1994
		JP 62041668 A	23-02-1987
		JP 5077433 B	26-10-1993
		KE 3865 A	19-05-1989
		KR 9402247 B1	19-03-1994
		LU 86534 A1	03-09-1987
		MX 171389 B	22-10-1993
		NL 8601949 A	16-02-1987
		NO 863062 A , B,	02-02-1987
		NZ 217006 A	26-04-1989
		PH 26882 A	16-11-1992
		PL 260858 A1	21-04-1987
		PT 83094 A , B	26-01-1987
		SE 8603252 A	31-01-1987
		SG 8789 G	07-07-1989
		US 5035237 A	30-07-1991
		ZA 8605655 A	27-05-1987
WO 0045879	A	10-08-2000	AU 1972400 A
			WO 0045879 A1
			EP 1148906 A1
			JP 2002536080 T
WO 0141849	A	14-06-2001	AU 2006601 A
			AU 2509901 A
			AU 2510001 A
			AU 2672501 A
			AU 3007801 A
			WO 0141845 A1
			WO 0141846 A1
			WO 0141847 A2
			WO 0141848 A1
			WO 0141849 A2
			EP 1235604 A1
			EP 1235606 A1
			EP 1235607 A1
			EP 1235608 A2
			EP 1235609 A2
			JP 2003516196 T
			JP 2003516197 T
			JP 2003516198 T
			JP 2003516199 T
			TW 482689 B
			US 2002189612 A1
			US 2003000524 A1
			US 2003079744 A1
			US 2003005926 A1
GB 1387954	A	19-03-1975	AR 198921 A1
			AU 6818374 A
			BE 814669 A1
			CA 1055350 A1
			24-07-1974
			23-10-1975
			04-11-1974
			15-05-1979



## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/00599

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
GB 1387954	A	CH 564950 A5	15-08-1975	
		DE 2421761 A1	21-11-1974	
		ES 426030 A1	01-07-1976	
		FR 2228499 A1	06-12-1974	
		IL 44695 A	31-01-1977	
		JP 50048788 A	01-05-1975	
		NL 7406119 A	12-11-1974	
		NO 133923 B	12-04-1976	
		SE 409547 B	27-08-1979	
		US 3870046 A	11-03-1975	
		ZA 7402561 A	30-04-1975	
WO 9834664	A	13-08-1998	AU 5889398 A	26-08-1998
			EP 0973569 A1	26-01-2000
			WO 9834664 A1	13-08-1998